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# **Soil and Water Conservation News**

United States  
Department of  
Agriculture

Soil  
Conservation  
Service

APRIL 1988

Volume 9, Number 1

25622  
56

Volunteers  
Take Pride



**Cover:** Around the Nation, Earth Team Volunteers are rallying to the cause of soil and water conservation.  
(Photo by Chris Lozos, SCS, Washington, D.C.)

# Comments from the SCS Chief:

## Earth Team Volunteers—Our Newest Partners in Conservation

The Soil Conservation Service is proud of its newest partners in conservation, Earth Team volunteers. Last year, some 2,200 Earth Team volunteers donated more than 132,000 hours to help SCS conserve soil and water. Their service is valued at more than a million dollars.

Our traditional conservation partners—conservation district officials—have a record of unpaid service going back more than 50 years. Joining the Earth Team is a new way for other people to give their time, talent, and energy to help protect and improve the Nation's natural resources.

In many States, Earth Team volunteers are helping us tell landowners and land users about the conservation provisions of the 1985 Farm Bill (Food Security Act of 1985). They are helping to set up meetings with farmers and ranchers; writing articles, news releases, radio spots, and slide shows; and helping with many other information jobs.

This is the kind of help we need as the Farm Bill's December 31, 1989, conservation planning deadline grows closer. Landowners growing crops on highly erodible land need the facts. They are making decisions that will determine if they will stay eligible for certain U.S. Department of Agriculture program benefits.

Volunteers are also in the field helping with conservation planning. And, they are in offices helping to enter data into computers and process paperwork. Some are putting soil survey information on Agricultural Stabilization and Conservation Service maps, mapping wetlands, installing windbreaks, and working with schools and community groups in conservation education. Many are also helping to protect and improve the Nation's public and private lands through Take Pride in America projects.

I am extremely proud of Earth Team volunteers for their outstanding work, and equally proud of SCS employees for recruiting and training such an outstanding volunteer workforce. We can all take pride in the partnership between SCS employees, conservation districts, and Earth Team volunteers.



# Volunteers

# TAKE PRIDE!

## They're Making the Team

**T**HIS PAST YEAR, Earth Team volunteers by the thousands shared their enthusiasm, expertise, and labor with the Soil Conservation Service. They worked alongside regular SCS employees as part of a professional conservation team in every State and at every level of SCS operations.

Whether helping to apply a conservation practice in an individual field or assisting with administrative tasks back at the office, Earth Team volunteers perform a variety of critical jobs. And, this past year, many have also been involved with projects of the Take Pride in America (TPIA) campaign. TPIA, which is supported by SCS, is a nationwide volunteer effort to conserve natural and cultural resources.

Members of the Earth Team are not paid, but receive a permanent work record of their contributions to the Soil Conservation Service as well as coverage for tort and injury claims while on the job. Those interested in joining can call toll-free 1-800-THE-SOIL for the location of the nearest SCS office looking for their talents.



Earth Team Volunteer Clarence Finch plants tree cuttings to stabilize the banks of the Fresno Slough near Fresno, Calif.



# The Earth Needs You

Recent volunteer activities include:

## Colorado

Earth Team volunteers worked 150 hours helping to install a living snowfence of more than 700 trees planted in three rows along a half mile of highway.

## Hawaii

Earth Team volunteers are helping to clean up the Kokua Hilo Bay in a TPIA project to improve water quality and to make Hilo's beaches cleaner and safer.

## Indiana

The Indiana Department of Education encourages schools to participate in TPIA activities and awards certificates of recognition for each TPIA project. Projects are submitted for State and national competition.

## Maryland

Thirty volunteers telephoned 384 landowners in Carroll and Montgomery Counties to inform them about the Conservation Reserve Program (CRP). Two-thirds of the landowners requested additional information or onfarm visits to determine if their land is eligible for the program. Under CRP, landowners can bid to retire highly erodible cropland to grass or trees for 10 years in exchange for annual rental payments.

## Michigan

Following severe flooding across the lower peninsula in the fall of 1986, many sites were eligible for technical and financial assistance from SCS through the Emergency Watershed Protection Program. SCS contracted for emergency repair work near Evart where a severely

eroding bank of the Muskegon River was threatening a major county road. Members of a local church volunteered to help the contractor stabilize 400 feet of the riverbank with rock rip-rap. In all, members of the congregation provided about 300 hours of assistance. Their assistance enabled the contractor to complete the job in 13 days, half the time engineers had estimated.

## Mississippi

Troy Laswell of Starkville volunteered more than 400 hours to the Oktibbeha County Soil and Water Conservation District. Laswell, a retired professor and head of the Geology Department of Mississippi State University, developed an inventory map of wetlands for the county and handled more than 125 referrals for highly erodible and wetland conservation certifications (AD-1026 forms).

## Nevada

One of the most valuable information tools at the Lovelock Field Office was made by a volunteer. It is a large, color-coded map of highly erodible land.

## North Carolina

To help carry out the conservation provisions of the Food Security Act of 1985, the Montgomery Soil and Water Conservation District asked for—and received—the volunteer assistance of 11 community leaders. The leaders distributed information, told landowners and land users how the conservation provisions would affect them, and signed on as Earth Team volunteers to help SCS make highly erodible land determinations.



## Oregon

Mike Wodesky of St. Helens volunteered 490 hours as a conservation technician for the Columbia Soil and Water Conservation District. His mapping and inventory work helped secure nearly \$1 million in grants and matching funds for streambank protection that will protect a city water source and park and improve water quality and fish habitat.

## South Dakota

Three volunteers teamed together at Huron to label and mount for display 600 western wheatgrass plants as part of the soil conservation contribution to Ag in the Classroom treasure barns. They also labeled and packaged 600 soil samples and helped assemble soil conservation

# Join the Team



*At far left, Earth Team Volunteers Clarence Finch, at right of photo, and Red Martin measure the growth of salt-tolerant eucalyptus trees in Fresno, Calif. A 28-acre stand of the trees is part of a pilot project to recycle highly saline subsurface drainage from irrigated cropland.*

*At near left, students tend tree on South Carolina school site. Earth Team volunteers share their concern for conserving natural resources with students and youth groups.*

information for the teachers' notebooks. Treasure barns are used statewide to teach about agriculture in elementary schools.

## **Vermont**

Volunteers spent a day this past May picking up litter from the banks and waters of the Winooski River in a project cosponsored by the TPIA campaign. Governor Madelene Kunin has endorsed TPIA in a public service announcement produced with SCS assistance.

## **Washington**

"I spent a lot of taxpayers' money digging our precious soil resources out of ditches," said Vern Sharp, who worked for 30 years with the

Washington State Department of Highways. Now that he is retired, Sharp is a volunteer for SCS at the Colfax Field Office. He wants to help farmers use such practices as divided slope farming and strip cropping to keep their soil in the fields and out of roadside ditches.

## **West Virginia**

Volunteers helped make the State's 150th Watershed Celebration at the Perry Emmett O'Brien Dam near Ripley a big success. They addressed more than 400 invitations, wrote news releases, made signs, decorated the site, directed traffic and parking, baked and decorated cakes, served food and beverages, and cleaned up the site after the celebration.

## **Wyoming**

Bonnie Shugart of Casper has been a homemaker for 8 years and now wants to prepare for a job in the clerical field. She volunteered to help update the SCS area office files, type, file supply orders, run the copy machine, and do other office tasks that will improve her marketable skills. She volunteers about 20 hours per week and has been learning to run a word processor and a computer.

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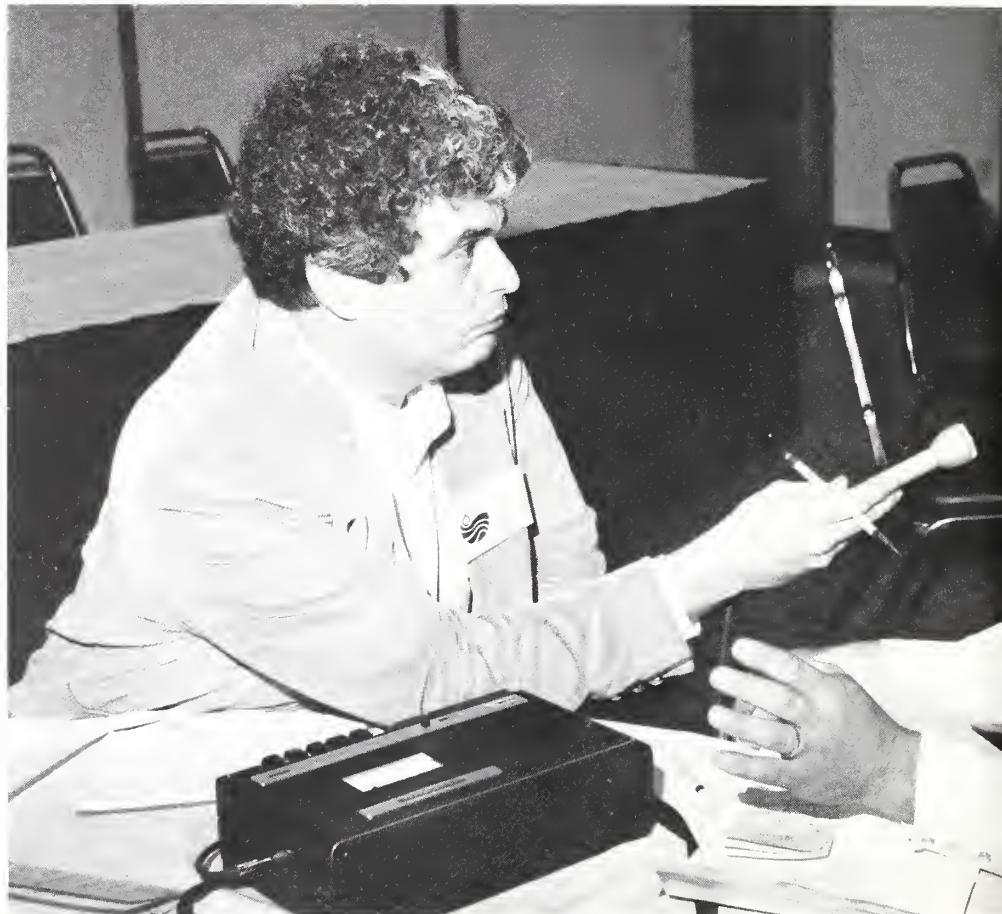
A month later he was on the air with SCS at the annual meeting of the Oregon Association of Conservation Districts (OACD).

# Volunteer Makes The News

**W**HEN Roy R. Hamilton donates some of his time to the Earth Team, he brings with him the skills he has acquired in over 17 years of radio broadcasting. He recently put these skills to work for conservation at a meeting of the directors of Oregon's 47 conservation districts.

The Earth Team consists of volunteers who assist the Soil Conservation Service of the U.S. Department of Agriculture (USDA). Hamilton, who works for an AM radio station in Portland, joined the Earth Team in October 1987. A month later he was on the air with SCS at the annual meeting of the Oregon Association of Conservation Districts (OACD).

As part of an SCS team providing assistance at the meeting, Hamilton drove from the SCS State office in Portland to the meeting at Newport on the Oregon coast and immediately began recording interviews for distribution to radio stations across the State. His assignment was to interview district directors about activities in their home districts, to interview SCS and other government officials about the conservation provisions of the Food Security Act of 1985, and to report other items of interest.



Earth Team Volunteer Roy R. Hamilton, left, interviews John Albertson, director of the Lakeview Soil and Water Conservation District, at OACD meeting.

Hamilton interviewed the SCS State conservationist and the State executive director of USDA's Agricultural Stabilization and Conservation Service about the Food Security Act. He interviewed the assistant administrator of Oregon's Division of Soil and Water Conservation about planning and discretionary State grants to conservation districts. He interviewed the OACD's "Teacher-of-the-Year" and the seventh grade speech contest winner. He interviewed the president of OACD, a member of the Oregon Soil Conservation Commis-

sion, and at least a half dozen district directors.

During his 2-day involvement with the meeting, Hamilton spent about 6 hours traveling and about 18 hours at the controls of a tape recorder, with microphone and/or telephone, creating and transmitting material for broadcast. In all, he provided 16 radio stations across Oregon with one or more of the 31 radio spots he prepared. He was so busy that he missed lunch both days, had dinner late both evenings, and didn't get home the last day until nearly 9 p.m.

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Olson has presented slide shows on timely conservation topics to civic groups, written weekly newspaper articles, and organized public meetings.



Although Hamilton is able to work for the Earth Team only a couple of days a month, his professional experience has enabled him to make a valuable contribution to conservation in a very short time. SCS officials in the State office, who would like Hamilton's help in producing slide shows and radio material on highly erodible land determinations and water supply forecasts, are hoping that this is just the beginning.

**Douglas A. Bishop**, public affairs specialist/Earth Team coordinator, SCS, Portland, Oreg.

## Conservation Promoted

**H**E HAS RETIRED from the pipeline business, but B.F. (Bud) Olson is still in the trenches. He's promoting conservation as an Earth Team volunteer for the Soil Conservation Service in Malvern, Ark.

Olson, a retired supervisor for a gas pipeline company, joined the SCS Earth Team in 1986. He sat down with SCS personnel at the Malvern field office and worked out a strategy for a countywide information and education campaign to assist the Hot Spring Conservation District. Following approval from district directors, Olson began promoting conservation programs every way he could. Now the community and local SCS staff wonder how they ever got along without him.

Some of Olson's first target audiences for SCS educational material were school principals and teachers throughout the county. Olson made appointments with teachers of kindergarten through ninth grade and presented them with "Soil Conservation Education Kits" and "Conserving Soil" texts. When the teachers were ready to present these materials to their classes, Olson was there to assist.

The pipeline business from which he retired provided Olson with considerable experience in working with different types of soils and an appreciation for the information SCS provides on soils. Olson helped initiate—and spoke at—a seminar on

how to hold soil judging contests and how to inform others of soil-saving techniques. The seminar was attended by Future Farmers of America sponsors and vocational agriculture teachers.

Olson has presented slide shows on timely conservation topics to civic groups, written weekly newspaper articles, and organized public meetings. One meeting was used to introduce the newly published soil survey of the county. Olson worked to increase attendance by discussing the importance of the soil survey on his weekly radio program. He hosts a 5-minute show, "Conservation Corner," every Saturday on a local AM radio station.

"SCS responsibilities to the public have accelerated over the past couple of years with the conservation provisions of the Food Security Act," said Randle Buckner, SCS district conservationist. "Bud Olson's assistance with our conservation education activities has freed the professional staff to meet these responsibilities."

Olson not only promotes conservation, but he also promotes the volunteer program itself. The SCS Earth Team is different from other volunteer programs, he said, "because it offers multiple opportunities to do something positive and creative for the community, county, and State."

**Suzanne Pugh**, public affairs specialist, SCS, Little Rock, Ark.

# Pride Grows In Nursery

**H**IGH SCHOOL students in Platte County, Mo., are taking pride in America. They have planted a conservation nursery that is producing low-cost trees for windbreaks to cut home energy costs, protect livestock from winter storms, provide habitat for wildlife, and beautify the landscape.

The nursery is a Take Pride in America (TPIA) project of Dennis Fulk, a Platte County farmer; Steve Goodlet, a West Platte High School biology teacher; student volunteers from the high school; and the Platte County Soil and Water Conservation District. The idea for the nursery grew out of efforts to establish more windbreaks in the county by Terry Breyfogle, district conservationist for the Soil Conservation Service, and Reggie Bennett, a wildlife biologist who works for the Missouri Department of Conservation (MDC).

The project began in the spring of 1987 when MDC funded the purchase from commercial nurseries of 150 young Norway spruce trees and 50 young blue spruce trees. MDC also provided 200 white pine seedlings from the State nursery. Breyfogle, Bennett, and eight student volunteers, who are members of the SCS Earth Team, planted the trees on a quarter acre of Fulk's farm. The same number of trees will be planted in each of the next 4 years until the nursery covers  $1\frac{1}{4}$  acres.

Goodlet, the biology teacher, said the TPIA project has been good for all of his students in terms of teaching them about wildlife and the role habitat plays in the life cycle.

All the trees will be grown in the nursery until they reach a height of about 4 feet, when they will be sold by the Platte County Soil and Water Conservation District for use in windbreaks. The district plans to charge only enough to recover its administrative expenses and compensate Fulk for what he would have made if he had kept the land in soybeans. The nursery should eventually provide enough trees for four to seven 50-tree windbreaks per year. The harvested area will then be restocked every year.

Bennett, the wildlife biologist, said allowing the trees to grow to 4 feet before transplanting them to windbreaks is an important part of the project. He explained that the bigger trees survive better than seedlings, especially in farm windbreaks where many farmers do not have time to provide the care required by seedlings.

"We're trying to take the risk so that the landowner doesn't have to," Bennett said. "The added advantage is that when you plant 4-foot trees, you have an instant windbreak—something that looks nice and provides a benefit right away."

In a related activity, 20 West Platte High School students, along with the 8 original volunteers, planted 3,000 trees and shrubs on MDC's Platte Falls Wildlife Area to improve the stream corridor and provide wildlife habitat.

"We tried to build leadership in the project," said Breyfogle, the district conservationist. "We did that by allowing the eight original volunteers to supervise some of the other high school students."

One of the students, Ron Mann, has already put his experience to good use. He recently helped another

private landowner establish a windbreak.

Goodlet, the biology teacher, said the TPIA project has been good for all of his students in terms of teaching them about wildlife and the role habitat plays in the life cycle. "It's good to have people in the community like Terry and Reggie who are interested in young people," he said.

Bennett, who works with SCS in a 12-county area in northwest Missouri, would like to take his interest and spread it to others. "I'm going to try to start Take Pride projects like this in other counties," he said.

**Charlie Rahm**, public affairs specialist, SCS, Columbia, Mo.



Dennis Fulk inspects windbreak irrigation system on his farm in Platte County, Mo.

# 1987 Conservation Highlights

## Summary of Activities of the Soil Conservation Service for Fiscal Year 1987

THE U.S. Department of Agriculture's (USDA) Soil Conservation Service provides technical assistance in planning and applying conservation practices and systems to reduce soil erosion, protect and conserve water, and reduce upstream flood damage. Most of this assistance is provided to farmers, ranchers, and other land users who have developed conservation plans for their land in cooperation with the Nation's nearly 3,000 local soil conservation districts.

During fiscal year 1987, SCS provided assistance to 1,068,029 land users and units of government, 566,034 of whom applied one or more conservation practices. This resulted in 55.6 million acres of land receiving some form of conservation treatment. A total of 84,265 land users, who control 22.7 million acres, became new district cooperators.

Following are highlights of SCS activities during fiscal year 1987.



### Food Security Act Conservation Provisions

SCS has been heavily involved in implementing the conservation provisions of the Food Security Act of 1985. These provisions—known as the Conservation Reserve Program, conservation compliance, sodbuster, and swambbuster—are designed to reduce soil erosion on highly erodible land, protect wetlands, and discourage the conversion of highly erodible land from grass and trees to crop production. Farmers who continue to crop highly erodible soils after December 31, 1989, must have a conservation plan approved by their local conservation district to remain eligible for certain USDA program benefits. With less than 2 years to go, SCS is in the middle of a massive effort to help farmers meet the 1990 deadline. This past year, SCS field office staffs made highly erodible land or wetlands determinations on 604,574 farms and verified approved conservation plans on 13.6 million acres of highly erodible land.

### Conservation Reserve Program

Under the Conservation Reserve Program (CRP), SCS provided technical assistance to nearly 140,000 farmers who entered into contracts to plant 15 million acres of highly erodible cropland to grass, trees, or wildlife cover and to maintain the new cover for at least 10 years. During 1987, the second year of the program, there were two signups when farmers could submit bids to enter land into the program. SCS field office staffs determine the eligibility of the land submitted in the bids and help farmers develop conservation plans and contracts for the land accepted. Participating farmers receive cost-sharing assistance in establishing the new cover and annual payments (averaging about \$48 per acre, nationally) from USDA's Agricultural Stabilization and Conservation Service

(ASCS). CRP signups will be held through 1990 in an effort to retire 40-45 million acres of highly erodible cropland. As of the last signup in 1987, a total of about 23 million acres has been accepted into the program. Establishing permanent cover is expected to reduce the average rate of erosion on this land by about 22 tons per acre per year.

### Information Resources Management

About 2,000 microcomputers were installed this past year in SCS field offices as part of the Field Office Communications and Automation System (FOCAS). More than 2,700 field offices now have FOCAS equipment, and an extensive training program is underway. The first major software package developed for agencywide application, CAMPS (Computer Assisted Management and Planning System), has been revised based on field tests and has been distributed to all field offices.



### **Conservation Tillage**

According to a survey by the Conservation Technology Information Center, U.S. farmers used conservation tillage on more than 86 million acres during 1987. This is about 32 percent of the total acres planted to crops, down slightly from the 33 percent rate in 1986. At nearly 45 percent (up from 43 percent in 1986), the Corn Belt was once again the region with the greatest percentage of its cropland in conservation tillage. The use of ridge-till, a type of conservation tillage, has grown steadily and increased to more than 2 million acres, mostly in the Plains and Corn Belt States.

### **Agricultural Conservation Program**

SCS provided technical assistance to about 100,000 farmers and ranchers who installed conservation practices under the Agricultural Conservation Program (ACP). Under long-term agreements, SCS helped 10,000 farmers install enduring conservation practices such as terraces and

grassed waterways. Through ACP, farmers and ranchers installed water conservation practices benefiting 490,000 acres, installed terrace systems benefiting 342,000 acres, and applied conservation tillage benefiting 631,000 acres. ACP is administered by ASCS, which provides financial assistance to participating landowners.

### **Great Plains Conservation Program**

Through the Great Plains Conservation Program (GPCP), SCS provides technical assistance and cost sharing to landowners to minimize the hazards of recurring drought and wind and water erosion in the 10 Great Plains States. This past year, 942 farmers and ranchers signed long-term GPCP contracts to apply conservation measures on 2.6 million acres. Conservation work was completed in 972 contracts covering 2 million acres.

### **Rural Abandoned Mine Program**

SCS administers the Rural Abandoned Mine Program (RAMP) authorized by Section 406 of the Surface Mining Control and Reclamation Act. Through RAMP, the agency provides technical and financial assistance for reclaiming soil and water resources on rural lands adversely affected by past coal mining. By the end of fiscal year 1987, 653 contracts obligating \$60.1 million had been signed. Conservation work done under these contracts has saved 690,000 tons of soil, eliminated 1,193 safety and health hazards, and improved water quality in 58,000 acres of lakes and 360 miles of streams.

### **Soil Surveys**

The State Soil Survey Database (SSSD), which contains soil survey information in an easy-to-manipulate, computerized format, was introduced in all SCS State offices. Each SCS State office was provided with a subset of its data from the national data base. The State offices can manage

the data and provide computerized sets to SCS field offices for use with CAMPS, the agencywide Computer Assisted Management and Planning System, to help individual landowners prepare conservation plans.

New soil surveys were published for 78 areas. Each survey describes the physical and chemical characteristics of the soils in the survey area—generally a county. It names and classifies the soils according to a nationwide system and provides information on the potentials and limitations of the soils for various uses. Detailed maps show where each soil is located. SCS mapped more than 36.9 million acres during the year, and cooperating agencies mapped an additional 8.6 million acres.

### **Soil Erosion Research**

SCS is working with USDA's Agricultural Research Service (ARS), USDA's Forest Service, and the U.S. Department of the Interior's Bureau of Land Management in the Water



Erosion Prediction Project (WEPP) to develop an improved erosion prediction method to replace the widely used Universal Soil Loss Equation. SCS is also helping with similar efforts on wind erosion, the Wind Erosion Research Model (WERM), and on ephemeral gully erosion research. Resource Conservation Act (RCA) funds were used to support 15 research projects ranging from the effects of erosion on crop and forage productivity to the action of ephemeral gullies and wind erosion.

#### **Soil Moisture and Temperature Monitoring**

Data collection was completed in an 8-year study in which SCS monitored soil moisture and temperature at eight sites across the country. These data have been used to refine and verify soil moisture models that will be used in irrigation scheduling, dryland farming, crop forecasting, and soil classification.

#### **Colorado River Salinity Control Program**

USDA and the U.S. Department of the Interior are cooperating in efforts to reduce salt loads from irrigated lands to improve water quality in the Colorado River. Rules and regulations, along with necessary operating procedures, were developed this past year to implement the new USDA onfarm Colorado River Salinity Control (CRSC) Program. Initial implementation funds were directed to the Unita Basin (Utah) and Grand Valley (Colorado) projects already underway using existing authorities. Fifteen new CRSC contracts have been signed with participants committing an estimated \$740,000 to these two projects. As of the end of fiscal year 1987, there were 56 applications requesting more than \$4 million in financial assistance in the Unita Basin and 47 applications requesting more than \$1.5 million in Grand Valley. Many of USDA's efforts have involved the ACP, under which ASCS provides cost-sharing assistance and

SCS provides technical assistance in the planning and application of conservation practices. Together, the ACP and new CRSC program have helped reduce average annual salt loading to the Colorado River by 25,307 tons and 35,160 tons, respectively, in the Unita Basin and Grand Valley projects.

#### **Resource Conservation and Development Areas**

Through the Resource Conservation and Development (RC&D) Program, 1,188 measures were completed to conserve the natural resources, promote the economic development, and improve the quality of life of rural communities during fiscal year 1987. SCS is providing USDA leadership in 189 RC&D areas authorized for assistance. Local RC&D councils, who set their own objectives, goals, and priorities, have been concentrating on rural development activities and are obtaining more and more financial support from nonfederal sources.

#### **Small Watersheds**

SCS began construction on 6 new small watershed projects in 1987, approved planning for 22 projects, authorized installation of 54 projects, and completed construction on or closed out 12 projects. Small watershed projects combine structural and nonstructural conservation measures to reduce flood damage and provide water for agriculture and municipal and industrial consumption.

#### **Flood Plains**

SCS completed 28 flood plain management studies and 16 reimbursable flood insurance studies in 1987. The studies, authorized by Section 6 of Public Law 83-566, provide data on natural resource benefits and other values provided by flood plains and on management alternatives. Local governments use this information to develop, adopt, implement, and amend flood plain management programs.



### River Basin Studies

SCS leads USDA cooperation with other Federal, State, and local agencies in making investigations and surveys of river basins to guide the development of the water and related land resources in agricultural, rural, and upstream watersheds. During the past year, 64 river basin studies were in progress in 47 States and 8 studies were completed.

### Emergency Assistance

SCS funded approximately \$33.2 million worth of emergency watershed protection work during the year to help repair damage caused by floods, fires, and other natural disasters in 34 States.

### Farmland Inventories

SCS leads USDA efforts in inventorying important agricultural areas. By the end of fiscal year 1987, SCS had published important farmland maps for about 1,200 counties across the Nation. Another 45 maps are nearly complete, and 130 maps are in the early

planning stage. These maps show the extent of prime, unique, and other farmlands of local and State importance. Statewide prime farmland maps have been completed for 18 States.

### Cartography and Geographic Information Systems

The Geographical Resource Analysis Support System (GRASS), a geographical computer software package, was converted to operate on the FOCAS microcomputers and is being tested at seven SCS State and field offices. GRASS can digitize soil survey maps, interpret soil data, and perform analyses for conservation, watershed, and river basin planning. It is expected to be released for field office use in the summer of 1988.

### Resource Inventories

Data were collected for the 1987 National Resources Inventory (NRI), the latest in a series of such studies conducted by SCS to determine the status, condition, and trend of the Nation's soil, water, and related resources. The data, which will be released in 1988, cover eight categories: (1) soil characteristics and interpretations; (2) land cover; (3) land use; (4) erosion; (5) land treatment; (6) conservation treatment needs; (7) vegetative conditions; and (8) cropland potential. The 1987 NRI will provide information for State and national policy and program formulation, development of the 1990 Farm Bill, allocation of funds, and placement of personnel. It will also be used to fill requests for data from other Federal agencies, State governments, universities, consultants, resource and conservation organizations, and the news media.

### Engineering

SCS is obtaining image processing and presentation equipment for use at its National Headquarters and four regional National Technical Centers. This equipment, which combines video and computer technology, can be used to display and dramatize design features for interactive planning by different staffs, to simulate the impacts of different designs and help land users make decisions, to help with internal briefings and training, and to promote conservation and provide information at public meetings and to media representatives.

Field office software is being developed for engineering practices in erosion control, water conveyance, water control (embankment-type practices), irrigation and drainage, and agricultural waste management. Progress continued in using and evaluating cropland water management systems to improve off-site water quality.



## Rural Development

Rural enterprise teams, made up of representatives from SCS and other USDA agencies, have been established in each State as part of USDA's rural regeneration initiative. These teams are helping rural communities to assess their development needs and to develop plans for addressing these needs. They also provide technical assistance. This past year SCS assisted approximately 8,000 units of government to address their natural resource problems.

## Volunteers

More than 2,200 volunteers, of all ages, donated more than 131,000 hours in FY 1987 to help SCS with soil and water conservation. Their time, most of it spent in field tasks, is valued at more than a million dollars. SCS is seeking more volunteers.

## Ground Water Research

SCS provided soil data and other assistance to ARS in the design of research to determine what happens to pesticides applied in side-by-side

conventional tillage and conservation tillage systems at 11 locations throughout the Nation. SCS is working with ARS in the testing of predictive ground water quality models at several other locations.

## Water Quality

USDA has issued policies regarding the role of agriculture in dealing with nonpoint sources of pollution and a ground water policy to guide activities of USDA agencies. As a result, SCS developed a water quality policy for integrating both surface and ground water quality protection and improvement into SCS programs and a strategic (long-range) plan to implement a nonpoint-source pollution policy to achieve State and national water quality objectives. An SCS task force has begun a 3-year project to develop a procedure that will identify water quality effects for conservation plan alternatives. SCS employees have

been detailed to work with the Environmental Protection Agency (EPA) in Boston, Chicago, and Kansas City and others will be detailed to Dallas, Philadelphia, and New York City. SCS assisted EPA and the National Association of Conservation Districts in regional information meetings regarding implementation of the Nonpoint Source Program (Section 319 of the amended Clean Water Act) and helped EPA and Canada renegotiate the Great Lakes Water Quality Agreement.

## Rural Clean Water Program

The Rural Clean Water Program (RCWP) was created by Public Law 96-108 in 1980 as an experiment to evaluate the effectiveness of best management practices in solving nonpoint-source water quality problems. To date, 2,141 contracts have been approved totaling \$32.3 million in the 21 RCWP projects. When completed, the conservation practices in these contracts will adequately treat 542,000 acres.

## Snow Surveys

Through its Snow Telemetry System (SNOWTEL), SCS collected snowpack information at 590 automatic data collection sites in the Western United States. SCS issued more than 3,500 water supply forecasts used by municipal water authorities, irrigation companies, and individuals. With funds from the National Weather Service, the SNOWTEL system was expanded by 37 sites in the Colorado River Basin this past year to enable forecasters to predict runoff more accurately.

## Information and Education

SCS employees at all levels have helped increase participation in soil and water conservation programs by increased efforts to keep land users and the general public informed of the conservation provisions of the Food Security Act of 1985 and of the assistance available from SCS through local conservation districts. These efforts have included working with the



news media; holding field days and demonstrations; giving talks and audiovisual presentations to civic groups; exhibiting at meetings; and preparing fact sheets, brochures, and other informational materials. They are designed to strengthen the conservation ethic for people of all ages. At the national level, the agency participated in four national teachers' meetings as well as the triennial Girl Scout convention. SCS and the General Federation of Women's Clubs continued the multiyear conservation program, "The World At Your Feet." Since 1984, thousands of club members have volunteered tens of thousands of hours in community-based soil and water conservation activities.

#### **Fish and Wildlife**

SCS continued to provide technical assistance to land users to maintain and improve wildlife and fish habitat on private land. This assistance led to improved wildlife management on more than 1.7 million acres.

#### **Range and Pasture**

Continued emphasis on range management resulted in the hiring of more range conservationists, increased range and pasture training, and the purchase of equipment for range and pasture planning. Through cooperative efforts with various State agencies and other organizations, SCS has provided technical assistance in reestablishing native warm-season grasses and forbs in Central and Eastern States. Increased technical assistance is also being given in prescribed burning, now recognized as an ecologically sound and economically feasible method of sustaining healthy vegetation on ungrazed pasture and rangeland. Computer software and data bases are being developed for use in SCS field offices to enhance conservation planning for pasture and rangeland. Data collection was completed for the first national inventory of brush.

#### **Windbreaks**

SCS assisted with planting an estimated 2,800 miles of field windbreaks in 1987 to protect cropland from wind erosion and provide wildlife habitat. The agency also assisted landowners with planting farmstead and feedlot windbreaks to save energy. With a number of other organizations, SCS helped establish a Windbreak Technology Working Group within the Society of American Foresters.

#### **Plant Materials**

SCS plant materials centers (PMC's) cooperatively released 14 conservation plants in 1987, bringing the total to 272. To meet increasing demands for conservation plants brought about by extensive plantings under the Conservation Reserve Program, the PMC's have increased production of foundation seed for distribution to commercial seed producers. The PMC's are currently evaluating about 24,600 plants and conducting 2,700 field trials on

farms and ranches. The PMSOURCE data base has been expanded and is increasingly used to help locate commercial sources of seed.

#### **Forestry**

SCS provides technical assistance to land users to maintain and improve the forest resource on private lands. During this past year, the agency also made suitability determinations for 615,000 acres of eroding cropland planted to trees under the Conservation Reserve Program.

#### **Cultural Resources**

A management system prototype is being developed to help SCS field office staffs identify and protect cultural resources. Predictive models that help identify areas where important archeological sites might be located were tested in Delaware and Arkansas. Delaware will be using a model in conservation planning operations. Important archeological sites discovered in the course of SCS fieldwork this past year include the



remains of a prehistoric village in Delaware that was inhabited 3,000 years ago by people who maintained a vast trading and communications network throughout much of eastern North America.

#### **Sociology**

SCS sociologists prepared a paper entitled "Agricultural Trends and Resource Conservation: Implications and Issues" in an effort to identify trends in the structure of agriculture in the United States that may affect soil and water conservation policies and programs in the near future. They have also worked closely with 1890 colleges and SCS State offices to develop information on the special needs of limited-resource and minority farmers relative to the conservation provisions of the Food Security Act of 1985 and other programs.

#### **Reform '88**

As part of Reform '88, SCS has undertaken studies of nine programs and support activities. Especially selected SCS teams completed management improvement plans in 1987 for soil survey, resources inventory, audiovisual activities, and cartography. As these plans are implemented, SCS will benefit by increased efficiency and effectiveness from changes in organizational structure, processes, and automation.

**International Conservation**  
This past year, 185 SCS specialists traveled to 35 countries to provide assistance requested by the Agency for International Development (AID), international organizations, and individual countries. Several assignments were sponsored under the Soil Management Support Services, an AID project to provide technical assistance in soil survey, soil classification, and use and management of soils to developing countries. Personnel assignments included scientific and

technical exchanges as well as attendance at many international meetings. In return, 203 officials, scientists, and technicians from more than 60 foreign countries received personal consultation or tours of conservation practices in the United States.

#### **Strategic Planning and Policy Analysis**

In July 1987, SCS released a public review draft of the second appraisal authorized by the Soil and Water Resources Conservation Act (RCA) of 1977. The appraisal reports on the status, condition, and trends of the soil, water, and related resources of the Nation. Public comments are currently being reviewed and a final report is being prepared for distribution in mid-1988. Work is underway on an update of the National Program for Soil and Water Conservation, which will help guide USDA soil and water conservation programs for the next 10 years. A public review draft of this report is scheduled for release early in 1988.

#### **Economics**

SCS has developed a new procedure for the economic evaluation of land treatment called the Conservation Options Procedure (COP), a three-stage procedure that takes into account more than economic considerations. Two economic software packages are being developed for use in field office microcomputers. The Interactive Conservation Evaluation (ICE) Program is designed to evaluate resource management systems using both economic and physical criteria. The Cost and Return Estimator (CARE) is a user friendly crop budget generator designed to accommodate various levels of budgeting and other planning activities.

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Soil Conservation Service  
P.O. Box 2890, Room 6202-S  
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## USDA Seeks Comments

THE U.S. Department of Agriculture (USDA) is seeking comments from the public on a proposed update of its National Program for Soil and Water Conservation (NCP) for the years 1988-97.

Copies of the proposal will be available beginning April 4 in State and county offices of USDA's Soil Conservation Service. Written

comments should be directed to the office of the SCS State conservationist and postmarked no later than June 4.

More than 80,000 people submitted comments on the first NCP, which has determined USDA policies affecting the conservation of soil, water, and related resources since 1982. The update is required by the Soil and Water Resources Conservation Act (RCA) of 1977.

## Meetings

<b>April</b>	6-10 13-15	Association of American Geographers, Phoenix, Ariz. Southern Forestry Conference, Asheville, N.C.
<b>May</b>	21-23	American Pulpwood Association, Boston, Mass.
<b>June</b>	13-18 18-23 19-23 19-24 20-23 25-30 26-30	International Conference on Constructed Wetlands for Wastewater Treatment, Chattanooga, Tenn. American Seed Trade Association, Seattle, Wash. American Water Works Association, Orlando, Fla. Air Pollution Control Association, Dallas, Tex. General Federation of Women's Clubs, Grand Rapids, Mich. National Environmental Health Association, Cleveland, Ohio Association of Official Seed Certifying Agencies, Seattle, Wash.
<b>July</b>	11-14 19-21 20-22 26-28 27-29 29-31 31-Aug. 3	Coastal Zone 89, the Sixth Symposium on Coastal and Ocean Management, Charleston, S.C. Southeastern Region of the National Association of Conservation Districts, Asheville, N.C. North Central Region of the National Association of Conservation Districts, Green Bay, Wis. South Central Region of the National Association of Conservation Districts, Bossier City, La. Izaak Walton League of America, Green Bay, Wis. Northern Plains Region of the National Association of Conservation Districts, Wichita, Kans. Soil and Water Conservation Society, Columbus, Ohio

## Magazine Takes New Look

BEGINNING with this issue, *Soil and Water Conservation News* takes on a new look—bigger type, more photographs.

Also beginning with this issue, *Soil and Water Conservation News* will be produced using an automated electronic publishing system. This will reduce printing costs and production time, making it easier to put more current information in the magazine.

We invite readers to send their article ideas to the editor, *Soil and Water Conservation News*, Soil Conservation Service, P.O. Box 2890, Washington, DC 20013.